



## **The allocation of carbon in most common boreal dwarf shrubs compared to Scots pine seedlings**

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The floor of boreal pine forests consists of a dense layer of ground vegetation consisting of dwarf shrubs, herbs, grasses, mosses and lichens. The primary productivity of this vegetation is reported to be notable but the carbon (C) dynamics of the most common dwarf shrub plant species, *Calluna vulgaris*, *Vaccinium myrtillus* and *Vaccinium vitis-idaea* is poorly understood. In a controlled laboratory experiment, we determined the full C balances of these dwarf shrubs for the first time and compared to *Pinus sylvestris* by using long-term biomass accumulation, <sup>13</sup>C pulse labelling, CO<sub>2</sub> exchange measurements and analysis of non-structural carbon. The observed differences in the carbon dynamics are important in estimating the origin of belowground CO<sub>2</sub> fluxes in the field and in evaluating their biological relevance. Our results will improve current understanding of CO<sub>2</sub> sources and sinks in boreal forests.